

Adsorption of vapors of water and dioxane on bovine pancreas α -chymotripsin

Sirotkin V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The isotherms of sorption-desorption of water and water-dioxane vapors on bovine pancreas α -chymotripsin were-measured by IR spectroscopy at 298 K and values of the water activity within 0-0.98. The ability of the enzyme to bind water was found to be strongly dependent on the type of the sorption curve and on whether dioxane is present. A sorption mechanism capable of explaining how the ability of an enzyme to interact with the vapor of an organic solvent depends on the moisture content in the enzyme and the mode of its wetting was proposed. Copyright © 2005 by Pleiades Publishing. Inc.
